

## ABSTRACT

The autonomic tone of a patient is measured based on a photo-plethysmography signal that is representative of arterial pulse pressure of the patient. Such measures of autonomic tone can be used to monitor the hemodynamic status of a patient, and even to perform pacing interval optimization. Further embodiments relate to pacing interval optimization performed based on a signal indicative of cardiac contractions of a patient's heart, as the patient's heart is paced using different sets of pacing interval parameters. Such a signal can be a photo-plethysmography signal or an alternative type of signal. Measures of pulse amplitude are obtained from the signal, and pacing interval optimization is performed based on the measures of pulse amplitude.